98TH CONGRESS
2d Session
HOUSE OF REPRESENTATIVES
REPORT
98-873

AUTHORIZING APPROPRIATIONS FOR THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

JUNE 27, 1984.—Ordered to be printed

Mr. FUQUA, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H.R. 5154]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 5154) to authorize appropriations to the National Aeronautics and Space Administration for research and development, construction of facilities, and research and program management, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the Senate amendment insert the following:

That this Act may be cited as the "National Aeronautics and Space Administration Authorization Act, 1985".

TITLE I—AUTHORIZATIONS OF APPROPRIATIONS

SEC. 101. There is hereby authorized to be appropriated to the National Aeronautics and Space Administration to become available October 1, 1984:

(a) For "Research and development", for the following programs:

(1) Space transportation capability development, $351,400,000;

(2) Space station, $150,000,000;

(3) Physics and astronomy, $696,200,000;

(4) Life sciences, $63,300,000;

(5) Planetary exploration, $296,900,000;

(6) Space applications, $390,100,000 of which $45,000,000 is authorized only for the Advanced Communications Technology

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Satellite flight program which is designed to lead to a launch of such satellite no later than 1989;

(7) Technology utilization, $9,500,000;

(8) Aeronautical research and technology, $352,400,000, of which $24,000,000 is authorized only for activities which are designed to lead to a flight test of a single rotation or counter rotation turboprop concept no later than 1987 (and for supporting research and technology);

(9) Space research and technology, $150,000,000; and

(10) Tracking and data advanced systems, $15,300,000.

(b) For "Space flight, control and data communications", for the following programs:

(1) Space shuttle production and operational capability, $1,470,600,000;

(2) Space transportation operations, $1,319,000,000; and

(3) Space and ground network, communications and data systems, $795,700,000.

(c) Except as provided in section 102(a), for "Construction of facilities", including land acquisition, as follows:

(1) Repairs to test stand 500, George C. Marshall Space Flight Center, $1,600,000;

(2) Space shuttle facilities at various locations as follows:

(A) Modifications of site electrical substation, Lyndon B. Johnson Space Center, $3,200,000;

(B) Modification for single engine testing, National Space Technology Laboratories, $3,000,000;

(C) Construction of launch complex 39 logistics facility, John F. Kennedy Space Center, $10,000,000;

(D) Construction of solid rocket booster assembly and refurbishment facility, John F. Kennedy Space Center, $15,000,000;

(3) Space shuttle payload facilities at various locations as follows:

(A) Construction of additions to cargo hazardous servicing facility, John F. Kennedy Space Center, $4,600,000;

(B) Construction of biomedical research facility, Ames Research Center, $2,100,000;

(4) Construction of addition to network control center, Goddard Space Flight Center, $2,200,000;

(5) Construction of Earth and space science laboratory, Jet Propulsion Laboratory, $12,200,000;

(6) Construction of numerical aerodynamic simulation facility, Ames Research Center, $11,500,000;

(7) Modifications of the 8-foot high temperature tunnel, Langley Research Center, $13,800,000;

(8) Construction of 34-meter antenna, Madrid, Spain, $6,000,000;

(9) Modifications of 64-meter antenna, DSS-63, Madrid, Spain, $7,800,000;

(10) Repair of facilities at various locations, not in excess of $750,000 per project, $20,000,000;

(11) Rehabilitation and modification of facilities at various locations, not in excess of $750,000 per project, $25,000,000;

(12) Minor construction of new facilities and additions to existing facilities at various locations, not in excess of $500,000 per project, $5,000,000; and

(13) Facility planning and design not otherwise provided for, $12,000,000.

(d)(1) For "Research and program management", $1,316,000,000, and such additional or supplemental amounts as may be necessary for increases in salary, pay, retirement, or other employee benefits authorized by law.

(2) Of the funds authorized under paragraph (1), $1,000,000 shall be available for the activities of the National Commission on Space, established pursuant to title II of this Act.

(e) Notwithstanding the provisions of subsection (h), appropriations hereby authorized for "Research and development" and "Space flight, control and data communications" may be used (1) for any items of a capital nature (other than acquisition of land) which may be required at locations other than installations of the Administration for the performance of research and development contracts, and (2) for grants to nonprofit institutions of higher education, or to nonprofit organizations whose primary purpose is the conduct of scientific research, for purchase or construction of additional research facilities; and title to such facilities shall be vested in the United States unless the Administrator determines that the national program of aeronautical and space activities will best be served by vesting title in any such grantee institution or organization. Each such grant shall be made under such conditions as the Administrator shall determine to be required to insure that the United States will receive therefrom benefit adequate to justify the making of that grant. None of the funds appropriated for "Research and development" and "Space flight, control and data communications" pursuant to this Act may be used in accordance with this subsection for the construction of any major facility, the estimated cost of which, including collateral equipment, exceeds $500,000, unless the Administrator or the Administrator's designee has notified the Speaker of the House of Representatives and the President of the Senate and the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate of the nature, location, and estimated cost of such facility.

(f) When so specified and to the extent provided in an appropriation Act, (1) any amount appropriated for "Research and development," for "Space flight, control and data communications" or for "Construction of facilities" may remain available without fiscal year limitation, and (2) maintenance and operation of facilities, and support services contracts may be entered into under the "Research and program management" appropriation for periods not in excess of twelve months beginning at any time during the fiscal year.

(g) Appropriations made pursuant to subsection (d) may be used, but not to exceed $35,000, for scientific consultations or extraordinary expenses upon the approval or authority of the Administrator and the Administrator's determination shall be final and conclusive upon the accounting officers of the Government.

(h) Of the funds appropriated pursuant to subsections (a), (b), and (d), not in excess of $100,000 for each project, including collateral

equipment, may be used for construction of new facilities and additions to existing facilities, and for repair, rehabilitation, or modification of facilities: Provided, That, of the funds appropriated pursuant to subsection (a) or (b), not in excess of $500,000 for each project, including collateral equipment, may be used for any of the foregoing for unforeseen programmatic needs.

SEC. 102. (a) Notwithstanding the provisions of section 101(c) of the title, the total amount authorized to be appropriated by such section shall be $5,000,000 less than the sum of the amounts contained in paragraphs (1) through (13) of such section for individual projects.

(b) After the reduction specified in subsection (a) of this section is made, authorization is granted whereby any of the amounts prescribed in paragraphs (1) through (12) inclusive, of section 101(c)—

(1) in the discretion of the Administrator or the Administrator's designee, may be varied upward 10 per centum, or

(2) following a report by the Administrator or the Administrator's designee to the Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the circumstances of such action, may be varied upward 25 per centum, to meet unusual cost variations, but the total cost of all work authorized under such paragraphs shall not exceed the total of the amounts specified in such paragraphs.

SEC. 103. Not to exceed one-half of 1 per centum of the funds appropriated pursuant to section 101(a) or 101(b) hereof may be transferred to and merged with the "Construction of facilities" appropriation, and, when so transferred, together with $10,000,000 of funds appropriated pursuant to section 101(c) hereof (other than funds appropriated pursuant to paragraph (13) of such section) shall be available for expenditure to construct, expand, and modify laboratories and other installation at any location (including locations specified in section 101(c)), if (1) the Administrator determines such action to be necessary because of changes in the national program of aeronautical and space activities or new scientific or engineering developments, and (2) the Administrator determines that deferral of such action until the enactment of the next authorization Act would be inconsistent with the interest of the Nation in aeronautical and space activities. The funds so made available may be expended to acquire, construct, convert, rehabilitate, or install permanent or temporary public works, including land acquisition, site preparation, appurtenances, utilities, and equipment. No portion of such sums may be obligated for expenditure or expended to construct, expand, or modify laboratories and other installations unless a period of thirty days has passed after the Administrator or the Administrator's designee has transmitted to the Speaker of the House of Representatives and to the President of the Senate and to the Committee on Science and Technology of the House of Representatives and to the Committee on Commerce, Science, and Transportation of the Senate a written report containing a full and complete statement concerning (A) the nature of such construction, expansion, or modification, (B) the cost thereof including the cost of any real estate action pertaining thereto, and (C) the reason why such construction, expansion, or modification is necessary in the national interest.

SEC. 104. Notwithstanding any other provision of this Act—

(1) no amount appropriated pursuant to this Act may be used for any program deleted by the Congress from requests as originally made to either the House Committee on Science and Technology or the Senate Committee on Commerce, Science, and Transportation;

(2) no amount appropriated pursuant to this Act may be used for any program in excess of the amount actually authorized for that particular program by sections 101(a), 101(b), and 101(d); and

(3) no amount appropriated pursuant to this Act may be used for any program which has not been presented to either such committee;

unless a period of thirty days has passed after the receipt by the Speaker of the House of Representatives and the President of the Senate and each such committee of notice given by the Administrator or the Administrator's designee containing a full and complete statement of the action proposed to be taken and the facts and circumstances relied upon in support of such proposed action.

SEC. 105. It is the sense of the Congress that it is in the national interest that consideration be given to geographical distribution of Federal research funds whenever feasible, and that the National Aeronautics and Space Administration should explore ways and means of distributing its research and development funds whenever feasible.

SEC. 106. The authorization for shuttle production and operational capability includes provisions for the production of structural spares and the critical skills necessary for installation of electrical, mechanical, and fluid systems thereby maintaining production readiness for a fifth orbiter vehicle.

SEC. 107. No civil space station authorized under section 101(a)(2) of this title may be used to carry or place in orbit any nuclear weapon or any other weapon of mass destruction, to install any such weapon on any celestial body, or to station any such weapon in space in any other manner. This civil space station may be used only for peaceful purposes.

SEC. 108. (a) The Administrator of the National Aeronautics and Space Administration is directed to continue and to enhance such Administration's programs of remote-sensing research and development.

(b) The Administrator is authorized and encouraged to—

(1) conduct experimental space remote-sensing programs (including applications demonstration programs and basic research at universities);

(2) develop remote-sensing technologies and techniques, including those needed for monitoring the Earth and its environment; and

(3) conduct such research and development in cooperation with other public and private research entities, including private industry, universities, Federal, State, and local government agencies, foreign governments, and international organizations, and to enter into arrangements (including joint ventures) which will foster such cooperation.

SEC. 109. It is the intent of the Congress that expenditures made from sums appropriated pursuant to the authorization contained in subsection (a)(8) of section 101 of this Act for activities in the advanced turboprop program should be recouped by the National Aeronautics and Space Administration if and when commercially successful products are developed by the aircraft industry as a direct result of such activities. For this purpose the Administrator shall submit to Congress within sixty days of enactment of this Act a plan for the payment to the Administrator of royalties by firms in the aircraft industry with respect to any such products which may be so developed by them.

SEC. 110. (a) Section 102 of the National Aeronautics and Space Act of 1958, as amended, is amended—

(1) by striking out "(e), and (f)" in subsection (g) and inserting in lieu thereof "(e), (f), and (g)";

(2) by redesignating subsections (c) through (g) as subsections (d) through (h); and

(3) by inserting after subsection (b) the following new subsection:

"(c) The Congress declares that the general welfare of the United States requires that the National Aeronautics and Space Administration (as established by title II of this Act) seek and encourage, to the maximum extent possible, the fullest commercial use of space.".

(b) Section 102(d)(1) of the National Aeronautics and Space Act of 1958, as amended (and as redesignated by subsection (a) of this section), is amended by inserting "of the Earth and" after "knowledge".

SEC. 111. (a) Any Federal personal property may be disposed of in accordance with subsection (b) if such property—

(1) is scientific research or development equipment and is not personal property that may be used for general administrative purposes;

(2) has been loaned by the National Aeronautics and Space Administration to any academic institution or nonprofit organization; and

(3) as of March 31, 1984, has been on loan to any such institution or organization for at least two years.

(b) The Administrator may transfer title to property described in subsection (a) to an academic institution or nonprofit organization if the Administrator certifies that—

(1) such property is being used by the institution or organization holding such property for a purpose consistent with the use intended when the property was loaned; and

(2) the Administration will no longer need such property.

TITLE II—NATIONAL COMMISSION ON SPACE

PURPOSE

SEC. 201. It is the purpose of this title to establish a National Commission on Space that will assist the United States—

(1) to define the long-range needs of the Nation that may be fulfilled through the peaceful uses of outer space;

(2) to maintain the Nation's preeminence in space science, technology, and applications;

(3) to promote the peaceful exploration and utilization of the space environment; and

(4) to articulate goals and develop options for the future direction of the Nation's civilian space program.

FINDINGS

SEC. 202. The Congress finds and declares that—

(1) the National Aeronautics and Space Administration, the lead civilian space agency, as established in the National Aeronautics and Space Act of 1958, as amended, has conducted a space program that has been an unparalleled success, providing significant economic, social, scientific, and national security benefits, and helping to maintain international stability and good will;

(2) the National Aeronautics and Space Act of 1958, as amended (42 U.S.C. 2451 et seq.), has provided the policy framework for achieving this success, and continues to be a sound statutory basis for national efforts in space;

(3) the United States is entering a new era of international competition and cooperation in space, and therefore this Nation must strengthen the commitment of its public and private technical, financial, and institutional resources, so that the United States will not lose its leadership position during this decade;

(4) while there continues to be a crucial Government role in space science, advanced research and development, provision of public goods and services and coordination of national and international efforts, advances in applications of space technology have raised many issues regarding public and private sector roles and relationships in technology development, applications, and marketing;

(5) the private sector will continue to evolve as a major participant in the utilization of the space environment;

(6) the Nation is committed to a permanently manned space station in low Earth orbit, and future national efforts in space will benefit from the presence of such a station;

(7) the separation of the civilian and military space programs is essential to ensure the continued health and vitality of both; and

(8) the identification of long range goals and policy options for the United States civilian space program through a high level, representational public forum will assist the President and Congress in formulating future policies for the United States civilian space program.

NATIONAL COMMISSION ON SPACE

SEC. 203. (a)(1) The President shall within ninety days of the enactment of this Act establish a National Commission on Space (hereinafter in this title referred to as the "Commission"), which shall be composed of 15 members appointed by the President. The members appointed under this subsection shall be selected from among individuals from Federal, State, and local governments, in-

dustry, business, labor, academia, and the general population who, by reason of their background, education, training, or experience, possess expertise in scientific and technological pursuits, as well as the use and implications of the use of such pursuits. Of the fifteen members appointed, not more than three members may be employees of the Federal Government. The President shall designate one of the members of the Commission appointed under this subsection to serve as Chairman, and one of the members to serve as Vice Chairman. The Vice Chairman shall perform the functions of the Chairman in the Chairman's absence.

(2) Members appointed by the President under paragraph (1) of this subsection may be paid at a rate not to exceed the daily equivalent of the annual rate of basic pay in effect under section 5332 of title 5, United States Code, for grade GS–18 of the General Schedule for each day, including traveltime, during which such members are engaged in the actual performance of the duties of the Commission. While away from their homes or regular places of business, such members may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as persons employed intermittently in the Government service are allowed under section 5703 of title 5, United States Code. Individuals who are not officers or employees of the United States and who are members of the Commission shall not be considered officers or employees of the United States by reason of receiving payments under this paragraph.

(b)(1) The President shall appoint one individual from each of the following Federal departments and agencies to serve as ex officio, advisory, non-voting members of the Commission (if such department or agency does not already have a member appointed to the Commission pursuant to subsection (a)(1)):

(A) National Aeronautics and Space Administration.
(B) Department of State.
(C) Department of Defense.
(D) Department of Transportation.
(E) Department of Commerce.
(F) Department of Agriculture.
(G) Department of the Interior.
(H) National Science Foundation.
(I) Office of Science and Technology Policy.

(2) The President of the Senate shall appoint two advisory members of the Commission from among the Members of the Senate and the Speaker of the House of Representatives shall appoint two advisory members of the Commission from among the Members of the House of Representatives. Such members shall not participate, except in an advisory capacity, in the formulation of the findings and recommendations of the Commission.

(3) Members of the Commission appointed under this subsection shall not be entitled to receive compensation for service relating to the performance of the duties of the Commission, but shall be entitled to reimbursement for travel expenses incurred while in the actual performance of the duties of the Commission.

(c) The Commission shall appoint and fix the compensation of such personnel as it deems advisable. The Chairman of the Commission shall be responsible for—

(1) the assignment of duties and responsibilities among such personnel and their continuing supervision; and

(2) the use and expenditures of funds available to the Commission.

In carrying out the provisions of this subsection, the Chairman shall act in accordance with the general policies of the Commission.

(d) To the extent permitted by law, the Commission may secure directly from any executive department, agency, or independent instrumentality of the Federal Government any information it deems necessary to carry out its functions under this Act. Each such department, agency, and instrumentality shall cooperate with the Commission and, to the extent permitted by law and upon request of the Chairman of the Commission, furnish such information to the Commission.

(e) The Commission may hold hearings, receive public comment and testimony, initiate surveys, and undertake other appropriate activities to gather the information necessary to carry out its activities under section 204 of this title.

(f) The Commission shall cease to exist sixty days after it has submitted the plan required by section 204(c) of this title.

FUNCTIONS OF THE COMMISSION

SEC. 204. (a) The Commission shall study existing and proposed space activities and formulate an agenda for the United States civilian space program. The Commission shall identify long range goals, opportunities, and policy options for United States civilian space activity for the next twenty years. In carrying out this responsibility, the Commission shall take into consideration—

(1) the commitment by the Nation to a permanently manned space station in low Earth orbit;

(2) present and future scientific, economic, social, environmental, and foreign policy needs of the United States, and methods by which space science, technology, and applications initiatives might address those needs;

(3) the adequacy of the Nation's public and private capability in fulfilling the needs identified in paragraph (2);

(4) how a cooperative interchange between Federal agencies on research and technology development programs can benefit the civilian space program;

(5) opportunities for, and constraints on, the use of outer space toward the achievement of Federal program objectives or national needs;

(6) current and emerging issues and concerns that may arise through the utilization of space research, technology development, and applications;

(7) the Commission shall analyze the findings of the reviews specified in paragraphs (1) through (6) of this subsection, and develop options and recommendations for a long range national civilian space policy plan.

(b) Options and recommendations submitted in accordance with subsection (a)(7) of this section shall include, to the extent appropriate, an estimate of costs and time schedules, institutional require-

ments, and statutory modifications necessary for implementation of such options and recommendations.

(c) Within twelve months after the date of the establishment of the Commission, the Commission shall submit to the President and to the Committee on Commerce, Science and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives, a long range plan for United States civilian space activity incorporating the results of the studies conducted under this section, together with recommendations for such legislation as the Commission determines to be appropriate.

And the Senate agree to the same.

DON FUQUA,
DAN GLICKMAN,
HAROLD L. VOLKMER,
BILL NELSON,
MICHAEL A. ANDREWS,
MANUEL LUJAN, Jr.,
WILLIAM CARNEY
for section III only,
GEORGE E. BROWN, Jr.,
Managers on the Part of the House.

BOB PACKWOOD,
BARRY GOLDWATER,
SLADE GORTON,
HOWELL HEFLIN,
FRANK R. LAUTENBERG,
Managers on the Part of the Senate.

JOINT EXPLANATORY STATEMENT OF THE COMMITTEE OF CONFERENCE

The managers on the part of the House and the Senate at the conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill H.R. 5154 to authorize appropriations to the National Aeronautics and Space Administration for fiscal year 1983 for Research and Development, Construction of Facilities, and Research and Program Management, and for other purposes, submit the following joint statement to the House and the Senate in explanation of the disposition of the differences agreed upon by managers and recommended in the accompanying conference report.

The NASA request for fiscal year 1985 totaled $7,491,400,000. The House authorized $7,490,000,000 and the Senate amendment authorized $7,582,400,000. The committee of conference agrees to a total authorization for fiscal year 1985 of $7,526,400,000 as follows:

SUMMARY OF ADJUSTMENTS TO H.R. 5154—NASA FISCAL YEAR 1985 AUTHORIZATION

Program	Budget request	House action	Senate action	Committee of conference
Research and development:				
1(a)(1) space transportation cap. dev	$361,400,000	$346,400,000	$356,400,000	$351,400,000
1(a)(2) space station	150,000,000	150,000,000	150,000,000	150,000,000
1(a)(3) Physics and astronomy	677,200,000	687,200,000	705,200,000	696,200,000
1(a)(4) life sciences	63,300,000	63,300,000	63,300,000	63,300,000
1(a)(5) planetary exploration	286,900,000	296,900,000	296,900,000	296,900,000
1(a)(6) space applications	344,100,000	384,100,000	407,100,000	390,100,000
1(a)(7) technology utilization	9,500,000	9,500,000	9,500,000	9,500,000
1(a)(?) space commercialization	0	0	5,000,000	0
1(a)(8) aeronautical research and technology	342,400,000	347,400,000	357,400,000	352,400,000
1(a)(9) space research and technology	150,000,000	150,000,000	150,000,000	150,000,000
1(a)(10) tracking and data acquisition	15,300,000	15,300,000	15,300,000	15,300,000
Total: Research and development	2,400,100,000	2,450,100,000	2,516,100,000	2,475,100,000
Space flight, control and data communication				
1(b)(1) space shuttle prod./oper. cap	1,465,600,000	1,490,600,000	1,470,600,000	1,470,600,000
1(b)(2) space transportation oper	1,339,000,000	1,329,000,000	1,319,000,000	1,319,000,000
1(b)(3) space tracking and data acq	795,700,000	780,700,000	795,700,000	795,700,000
Total: Space flight, control and data communications	3,600,300,000	3,600,300,000	3,585,300,000	3,585,300,000
1(c) construction of facilities	160,000,000	150,000,000	150,000,000	150,000,000
1(d) research and program management	1,331,000,000	1,331,000,000	1,331,000,000	1,316,000,000
Subtotal	7,491,400,000	7,531,400,000	7,582,400,000	7,526,400,000
General reduction	0	41,400,000	0	0
Grand total	7,491,400,000	7,490,000,000	7,582,400,000	7,526,400,000

The points in disagreement and the resolution of them are as follows:

1. NASA requested $361,400,000 for Space Transportation Capability Development activities in fiscal year 1985.

The House authorized $346,400,000, a decrease of $15 million as follows: a decrease of $10 million for Engineering and Technical Base activities due to a reduced level of effort; and a decrease of $5 million for Payload Operations and Support Equipment associated with payload schedule delays.

The Senate authorized $356,400,000, a decrease of $5 million, all of which was for Payload Operations and Support Equipment associated with payload and schedule delays.

The Conference agreement authorizes $351,400,000 for Space Transportation Capability Development activities reflecting a $5 million reduction in Engineering and Technical Base activities and a $5 million reduction in Payload Operations and Support Equipment.

2. NASA requested $677,200,000 for Physics and Astronomy activities in fiscal year 1985.

The House authorized $687,200,000, an increase of $10 million which included: an increase of $4 million for Shuttle/Spacelab Payload Development activities to fund advanced technology development of the Solar Optical Telescope (SOT) and the Shuttle Infrared Telescope Facility (SIRTF); and an increase of $6 million for Research and Analysis activities—of which $3 million is for university laboratory equipment, and $3 million is to support advanced technology development on the advanced X-ray Astronomy Facility (AXAF).

The Senate authorized $705,200,000, an increase of $28 million which included: an increase of $14 million for Shuttle/Spacelab Payload Development activities—$6 million of which is to fund advanced technology development of the Solar Optical Telescope (SOT), $4 million is to fund advanced technology development of the Shuttle Infrared Telescope Facility (SIRTF), and $4 million is to fund the development of the Space Plasma Lab; and an increase of $14 million for Research and Analysis activities—$6 million of which is to support advanced technology development on the Advanced X-ray Astronomy Facility (AXAF), $3 million is to support Gravity Probe-B, $3 million is for theoretical astrophysics SR&T, and $2 million is for university instrumentation.

The Conference agreement authorizes $696,200,000 for Physics and Astronomy activities, an increase of $19 million as follows: an increase of $8 million for Shuttle/Spacelab 1 Payload development including $4 million for advanced technology development activities for the Solar Optical Telescope and the Shuttle Infrared Telescope Facility and $4 million for advanced technology development activities for the Space Plasma Laboratory and an increase of $11 million for Research and Analysis including $3 million for university instrumentation and laboratory equipment, $3 million for advanced technology development and the Advanced X-Ray Astronomy Faciliity, $2 million for theoretical astrophysics supporting research and technology, and $3 million for Gravity Probe-B.

3. NASA requested $286,900,000 for Planetary Exploration activities in fiscal year 1985.

The House authorized $296,900,000, an increase of $10 million. The increase is in Research and Analysis activities—with $2 million for university laboratory equipment, and $8 million for basic planetary research at universities.

The Senate authorized $296,900,000, an increase of $10 million. The increase is in Research and Analysis activities—with $2 million for university instrumentation, and $8 million for SR&T.

The Conference agreement authorizes $296,900,000 for Planetary Exploration activities, including the following: a $2 million increase for university instrumentation and laboratory equipment and an $8 million increase for basic planetary research at universities.

4. NASA requested $344,100,000 for Space Applications activities in fiscal year 1985.

The House authorized $384,100,000, a net increase of $40 million. This included: a $2 million redistribution of Solid Earth Observation funding—with a $2 million increase to measure Caribbean crustal movements, and an offsetting $2 million decrease achieved through a general reduction in Geodynamics funding; a $5 million redistribution of Environmental Observations funding—with a $5 million increase for advanced technology development for the International Solar Terrestrial Physics Program, and an offsetting $5 million reduction without prejudice for the Upper Atmosphere Research Satellite; and a $40 million increase to continue funding of an ACTS flight demonstration.

The Senate authorized $407,100,000 an increase of $63 million. This included: an $8 million increase in Environmental Observations—with a $5 million increase for advanced technology development for the International Solar Terrestrial Physics program, and a $3 million increase for university instrumentation; a $10 million increase to augment materials processing in space activities; and a $45 million increase to continue funding for an ACTS flight demonstration.

The conference agreement authorizes $390,100,000 for Space Applications activities, an increase of $46 million as follows: An increase of $2 million to measure Caribbean crustal movements within available funding for Geodynamics activities; an increase of $4 million for advanced technology development on the International Solar Terrestrial Program and $2 million for university instrumentation in Space Physics Research and Analysis; a reduction of $5 million in the Upper Atmospheric Research Satellite program without prejudice; an increase of $5 million to augment Materials Processing in Space activities; and an increase of $40 million to continue the flight demonstration program envisioned for the Advanced Communications Technology Satellite program. The intent of the additional funding for the Advanced Communications Technology Satellite program is for NASA to finalize and enter into a contract for the development of the Advanced Communications Technology Satellite as expeditiously as possible pursuant to Request for Proposal numbered 35-11907.

5. The Senate added a new line item (Space Commercialization) to their authorization bill. This line item did not appear in the NASA request for fiscal year 1985 or the House authorization bill.

The Senate authorized $5,000,000 for Space Commercialization in order to intitate National Centers of Excellence and Agency Space Commercialization activities. This presented a $5 million increase over the NASA request.

The conference agreement deletes the new line item for Space Commercialization but the House Science and Technology Committee and the Senate Commerce, Science, and Transportation Committee urge NASA to move expeditiously in establishing a high level focal point to facilitate space comercialization and direct that NASA propose a new line item for this activity in the fiscal year 1986 budget request.

6. NASA requested $342,400,000 for Aeronautical Research and Technology activities in fiscal year 1985.

The House authorized $347,400,000, a net increase of $5 million. This included: a $5 million decrease in Research and Technology Base activities—made up of a $5 million increase in high speed aeronautics, a $1 million increase in research on alternate fuels for general aviation aircraft, and a $11 million general reduction; and a $10 million increase in Advanced Propulsion Systems Technology to augment the Advanced Turboprop program. The House included language specifying that $24,000,000 million was authorized only for activities in the Advanced Turboprop Program which are designed to lead to a flight test no later than 1987.

The Senate authorized $357,400,000, a net increase of $15 million. This included: a $2 million redistribution within Research and Technology Base activities—with a $2 million increase for Advanced Ceramics Heat Engine Technology, offset by a $2 million general reduction; and a $15 million increase in Advanced Propulsion Systems Technolgy to augment the Advanced Turboprop program. The Senate included language specifying that $29 million was authorized only for activities which are designed to lead to a flight test of a single rotation or counter rotation turbo-prop concept no later than 1987.

The Conference agreement authorizes $352,400,000 for Aeronautical Research and Technology activities. This includes: an $8 million redistribution within the research and technology base made up of a $5 million increase in high-speed aeronautics, a $1 million increase in research on alternate fuel, for general aviation a $2 million increase for advanced ceramics heat engine technology and an $8 million general reduction; and a $10 million increase to augment the Advanced Turboprop Program. The Conferees adopt the Senate version of language relating to flight test of a turbo-prop concept, except that $24 million is authorized only for activities designed to lead to such a flight test.

The Committee of Conference understands that this amount is adequate to keep the program on track toward a flight test in 1987. Whether that test is conducted with the single rotation, counter rotation, or some other concept is a matter for the technical judgment of NASA. Nevertheless, the available funds should be applied so as to assure accomplishment of the flight test objective by 1987.

7. NASA requested $150,000,000 for Space Research and Technology activities in fiscal year 1985.

The House authorized the same total as that requested, but stipulated a $2 million redistribution of funds in Space Research and

Technology Base activities—with a $2 million increase to augment the SP-100 Nuclear Power program, offset by a $2 million general reduction.

The Senate authorized the NASA request.

The Conferees adopt the House position.

8. NASA requested $1,465,600,000 for Shuttle Production and Operational Capability activities in fiscal year 1985.

The House authorized $1,490,600,000, a net increase of $25 million. This included: a $50 million increase for augmentation of Orbiter structural spares and to maintain production readiness for a fifth Orbiter; a $15 million decrease in Launch and Mission Support through the deferment of less critical activities; and a $10 million decrease in Changes and Systems Upgrading—the Administrator's reserve.

The Senate authorized $1,470,600,000, a net increase of $5 million. This included: a $45 million increase for augmentation of Orbiter structural spares and to maintain production readiness for a fifth Orbiter; a $15 million decrease in Launch and Mission Support through the deferment of less critical activities; and a $25 million decrease in Changes and Systems Upgrading—the Administrator's reserve.

The Committee of Conference adopts the Senate position.

9. NASA requested $1,339,000,000 for Space Transportation Operations in fiscal year 1985.

The House authorized $1,329,000,000, a decrease of $10 million. This decrease reflected expected improvement in Shuttle operational efficiency.

The Senate authorized $1,319,000,000, a decrease of $20 million. This decrease reflected expected improvements in Shuttle operational efficiency.

The Conference agreement adopts the Senate position.

10. NASA requested $795,700,000 for Space Tracking and Data Acquisition activities in fiscal year 1985.

The House authorized $780,700,000, a decrease of $15 million. This decrease reflected expected improvements in operating efficiencies and modest reductions in service.

The Senate authorized the NASA request.

The Committee of Conference adopts the Senate position.

11. NASA requested $160,000,000 for Construction of Facilities in fiscal year 1985.

The House authorized $150,000,000, a decrease of $10 million. This decrease was the result of: a $5 million decrease in funding for the Numerical Aerodynamics Simulation Facility; and a $5 million decrease in funding for Rehabilitation and Modification activities.

The Senate authorized $150,000,000, a decrease of $10 million. This decrease was the result of: a $5 million decrease in funding for the Numerical Aerodynamics Simulation Facility; and a $5 million general reduction.

The Committee of Conference adopts the Senate position.

12. NASA requested $1,331,000,000 for Research and Program Management activities in 1985.

The House authorized the requested funding level, but stipulated that $1 million was authorized within available funds for the National Commission on Space.

The Senate authorization was the same as that for the House.

The substitute amendment authorizes $1,316,000,000 for Research and Program Management activities. One million of these funds shall be available for the activities of the National Commission on Space.

13. The House adopted Section 111 language reducing each sum in the Authorization bill by 0.55 percent.

The Senate authorization bill contains no such language.

The Conference agreement adopts the Senate position.

14. The substitute amendment resolves a number of minor technical language differences in the House and Senate actions.

15. The House bill included a new section 107 to direct NASA to continue to enhance the agency's programs of remote sensing research and development.

The Senate bill contained no similar language.

The Conference agreement includes the House provision as Section 108.

16. The Senate bill included a new Section 107 stating that the civil Space Station may not be used to carry or place into orbit any nuclear weapon or any other weapon of mass destruction, and that the Space Station may be used only for peaceful purposes.

The House bill contained no similar language.

The Conference agreement includes the Senate provision as Section 107.

17. The Senate bill included a new Section 108 stating that NASA will as expeditiously as possible finalize and enter into a contract for the development of the Advanced Communications Technology Satellite. The Section also stated that NASA must enter into that contract only with the entity with which it had been negotiating pursuant to the NASA request for proposal.

The House bill contained no similar language.

The Conference agreement deletes the Senate provision.

18. The House bill included a new Section 108 expressing the intent of Congress that government expenditures in supporting the development of prop fan technology be repaid by firms in the aircraft manufacturing industry when and if commercially successful products employing that technology are produced by such firms.

The Senate bill contained no similar language.

The Conference agreement adopts the House provision as Section 109. It is expected that NASA and the aeronautical industry will make a full faith effort to design a workable recoupment plan. The authorizing committees will then evaluate the pros and cons of the plan before making a final decision on implementation.

19. Both the House and Senate bills included a new Title II establishing a National Commission on Space. There were a number of language differences in the two bills. Some of the more important included:

The House bill provided for 14 members; the Senate 15.

The House bill specified the NASA Administrator as Vice Chairman; the Senate bill left this appointment to the President.

The Senate bill provided that members of the Commission would have to be drawn from State and local governments, industry, business, labor, and academia; the House bill contained no similar language.

The House bill specified the appointment of one individual from each of 8 Federal departments and agencies to serve as ex officio non-voting members; the Senate bill specified 4 individuals from the Federal Government without listing specific departments and agencies.

The House bill provided that Congressional advisory members be appointed by the President of the Senate and the Speaker of the House; the Senate bill provided for these appointments to be made by the President.

The Senate bill gives greater direction and identifies more issues that are to be addressed by the Commission, including:

A review of the adequacy of the National Aeronautics and Space Act

A review of the relationship between the civilian and military space programs

A review of the methods, occasions and circumstances under which the Nation should pursue a permanent presence in space.

The Conference agreement includes a revised Title II which represents a compromise. This compromise is an improvement on both the previous House and Senate versions in that it fully emphasizes the civilian and independent nature of the Commission. The House Committee on Science and Technology and the Senate Committee on Commerce, Science, and Transportation expect that the NASA Administrator will be appointed as a member of the Commission.

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